



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,043	09/15/2003	Hiroyasu Jobetto	03563/LH	1673
1933	7590	06/07/2004	EXAMINER	
FRISHAUF, HOLTZ, GOODMAN & CHICK, PC 767 THIRD AVENUE 25TH FLOOR NEW YORK, NY 10017-2023			SEFER, AHMED N	
			ART UNIT	PAPER NUMBER
			2826	

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/663,043

Applicant(s)

JOBETTO, HIROYASU

Examiner

A. Sefer

Art Unit

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 16-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 11-15 is/are rejected.
- 7) ☒ Claim(s) 9 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/15/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election without traverse of Group I (claims 1-15) is acknowledged.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 3, 5, 6 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Paek US PG-Pub 2002/0093078:

Paek discloses (see figs. 4-6 and page 5, par. 0087) a semiconductor package comprising: a semiconductor substrate 310 including a device region on one surface thereof, and a connecting pad 323 electrically connected to the device region; a support substrate 350 formed on a side of one surface of the semiconductor substrate; an external electrode 337 formed on a side of the other surface of the semiconductor substrate; and a connecting means 378, partially extended outside the semiconductor substrate, for electrically connecting the connecting pad and external electrode.

As for claim 3, Paek discloses a connecting wire 10b having one end portion connected to the connecting pad, and the other end portion extended outside the semiconductor substrate.

As for claims 5 and 6, Paek discloses the connecting wire includes a portion in close contact with one surface of the semiconductor substrate or close contact with the support substrate (as in 6).

As for claim 13, Paek discloses a device region having a photoelectric conversion device region.

As for claim 14, Paek discloses the support substrate having a glass substrate.

4. Claims 1-8, 11, 12, 14 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Kouno et al. ("Kouno") US PG-Pub 2003/0230804.

Kouno discloses in fig. 8E a semiconductor package comprising: a semiconductor substrate 3 including a device region on one surface thereof, and a connecting pad 5 electrically connected to the device region; a support substrate 1 formed on a side of one surface of the semiconductor substrate; an external electrode 13a formed on a side of the other surface of the semiconductor substrate; and a connecting means 11 (through layer 10), partially extended outside the semiconductor substrate, for electrically connecting the connecting pad and external electrode.

As for claim 2, Kouno discloses a distribution wire 13b extended to the side of the other surface of the semiconductor substrate.

As for claim 3, Kouno discloses a connecting wire 10b having one end portion connected to the connecting pad, and the other end portion extended outside the semiconductor substrate.

As for claim 4, Kouno discloses (see par. 0070-0073) the connecting wire includes a metal plating layer 10a.

As for claims 5 and 6, Kouno discloses the connecting wire includes a portion in close contact with one surface of the semiconductor substrate or close contact with the support substrate (as in 6).

As for claim 7, Kouno discloses a projecting connecting electrode between the connecting pad and connecting wire.

As for claim 8, Kouno discloses an insulating film 12 formed between the other surface of the semiconductor substrate, which includes the connecting wire extended outside the semiconductor substrate, and the distribution wire.

As for claim 11, Kouno discloses the external electrode 13b formed on a connecting pad portion of the distribution wire 13a, and an insulating film 17 is so formed as to cover the other surface of the semiconductor substrate, which includes the distribution wire except for the external electrode.

As for claim 12, Kouno discloses the external electrode has a columnar electrode, and a solder ball 19 is formed on the columnar external electrode.

As for claim 14, Kouno discloses the support substrate has a glass substrate.

As for claim 15, Kouno discloses a transparent adhesive layer 2 formed between the semiconductor substrate and glass substrate.

***Allowable Subject Matter***

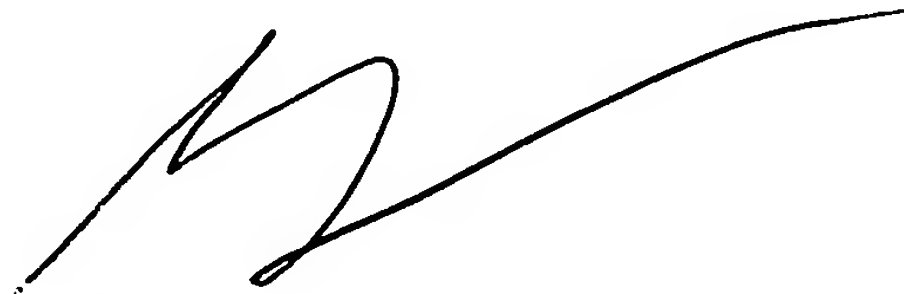
5. Claims 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Sefer whose telephone number is (571) 272-1921.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ANS  
May 31, 2004

A handwritten signature in black ink, appearing to be 'Nathan J. Flynn', written in a cursive style.

**NATHAN J. FLYNN**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2800**